

WHAT IS CLAIMED IS:

1. A distributed system in which a plurality of devices are coupled to each other through a network, comprising:

5 a service scenario which describes functions necessary to provide a service and relations between the functions in general description;

a context which serves as a criterion for selecting devices to be used in providing the service;

10 an extraction unit which extracts devices necessary for the service based on the service scenario;

a detection unit which detects devices located in a site where the service can be provided to a service requester; and

15 a service execution unit which executes the service for the service requester by linking the devices detected based on the context.

2. A distributed system according to claim 1, wherein the extraction unit extracts the devices by inquiring a
20 server holding a database concerning attribute information of the devices.

3. A distributed system according to claim 1, wherein the detection unit detects the devices located in the site
25 where the service can be provided by acquiring information on the devices extracted by the extraction unit.

4. A distributed system according to claim 3, wherein the service execution unit collects information from the devices detected by the detection unit and compares the collected information with context information to select
5 available devices.

5. A distributed system according to claim 1, wherein when the context changes while the service is being executed, the detection unit redetects devices in
10 accordance with the context having changed.

6. A distributed system according to claim 1, wherein, when it is detected, while the service is being executed, that there is a change in situations of the devices
15 located in the site where the service can be provided to the service requester, the detection unit redetects devices.

7. A distributed system according to claim 1, wherein
20 relations between the devices necessary to execute the service are held for each user requesting the service, and the devices are linked depending on the users.

8. A brokering method using a context in a distributed
25 system in which a plurality of devices are coupled to each other through a network, the method comprising the steps of:

preparing a service scenario and a context, the

service scenario describing functions necessary to provide a service and relations between the functions in general description, the context serving as a criterion for selecting devices to be used in providing the
5 service;

extracting devices necessary for the service based on the service scenario;

detecting devices located in a site where the service can be provided to a service requester; and

10 executing the service for the service requester by linking the devices detected based on the context.

9. A brokering method using a context according to claim 8, wherein, in the extracting step, the devices are
15 extracted by inquiring a server holding a database concerning attribute information of the devices.

10. A brokering method using a context according to claim 8, wherein, in the detecting step, the devices located in
20 the site where the service can be provided are detected by acquiring information on the devices extracted in the extracting step.

11. A brokering method using a context according to claim
25 10, wherein, in the step of executing the service, information is collected from the devices detected in the detecting step, and the collected information is compared with context information to select available devices.

12. A brokering method using a context according to claim 8, wherein when the context changes while the service is being executed, devices are redetected in accordance with the context having changed.

5

13. A brokering method using a context according to claim 8, wherein when it is detected, while the service is being execute, that there is a change in situations of the devices located in the site where the service can be
10 provided to the service requester, devices are redetected.

14. A brokering method using a context according to claim 8, wherein relations between the devices necessary to execute the service are held for each user requesting the
15 service, and the devices are linked depending on the users.